Operation/Reference Guide

Tango Amplifiers

DAS-TAMP4-SIG

Tango 4-Channel Amplifier

DAS-TAMP8-SIG

Tango 8-Channel Amplifier

Tango Distributed Audio

Last Revised: 2/10/2010

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- Disk drive mechanisms, pan/tilt heads, power supplies, and MX Series products are warranted for a period of one (1) year.
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All products returned to AMX require a Return Material Authorization (RMA) number. The RMA number is obtained from the AMX RMA Department. The RMA number must be clearly marked on the outside of each box. The RMA is valid for a 30-day period. After the 30-day period the RMA will be cancelled. Any shipments received not consistent with the RMA, or after the RMA is cancelled, will be refused. AMX is not responsible for products returned without a valid RMA number.

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IMPORTANT SAFETY INSTRUCTIONS

1. Read instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the grounding-type plug. The grounding plug has two blades and a third grounding prong. The third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.

12. Use only with cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified personnel. Servicing is required when the apparatus has been damaged in any way, such as power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

Warning: Shock Hazard *- The lightning flash within an equilateral triangle, intended to alert the user to the presence of un-insulated "Dangerous voltage" within the products enclosure that may be of significant magnitude to constitute a risk of electric shock to persons*

Read Accompanying Documentation *– The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.*

15. *The fuse should only be replaced with a T8AL250V fuse.*
16. The RCA, RJ11and RJ45 Jacks shall only be used for their intended use. Refer to accompanying documentation to insure that they are being used as intended.
17. The spring clip terminals and F-connector on the tuner module should only be used to connect an AM and FM antenna.
18. A grounded power outlet is required for safe operation.
19. The grounded 3 prong power cable will be the mains disconnect and it should remain readily available.
20. To completely disconnect the unit from the AC mains, disconnect the power supply cord plug from the AC receptacle.
21. The main voltage for the AC mains is 120v AC

Warning *– To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture. Do not expose this equipment to dripping or splashing and ensure that no objects filled with liquids are placed on the equipment.*

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Tango Amplifiers

Overview

Where more than one pair of speakers is required in Tango Distributed Audio zones, the Tango Amplifier (FIG. 1) provides the extra power needed to drive up to 4 additional speaker pairs per unit for a total of 12 additional speaker pairs or 24 channels per zone. Use Tango Amplifiers in backyards, large rooms or other zones where additional speakers are needed.

FIG. 1 DAS-TAMP4/8-SIG Tango Amplifier (front panel)

The **DAS-TAMP4-SIG** Tango 4-Channel Amplifier is a 4-channel amp that supports an additional 2 speaker pairs per unit.

The **DAS-TAMP8-SIG** Tango 8-Channel Amplifier is an 8-channel amp that supports an additional 4 speaker pairs per unit.

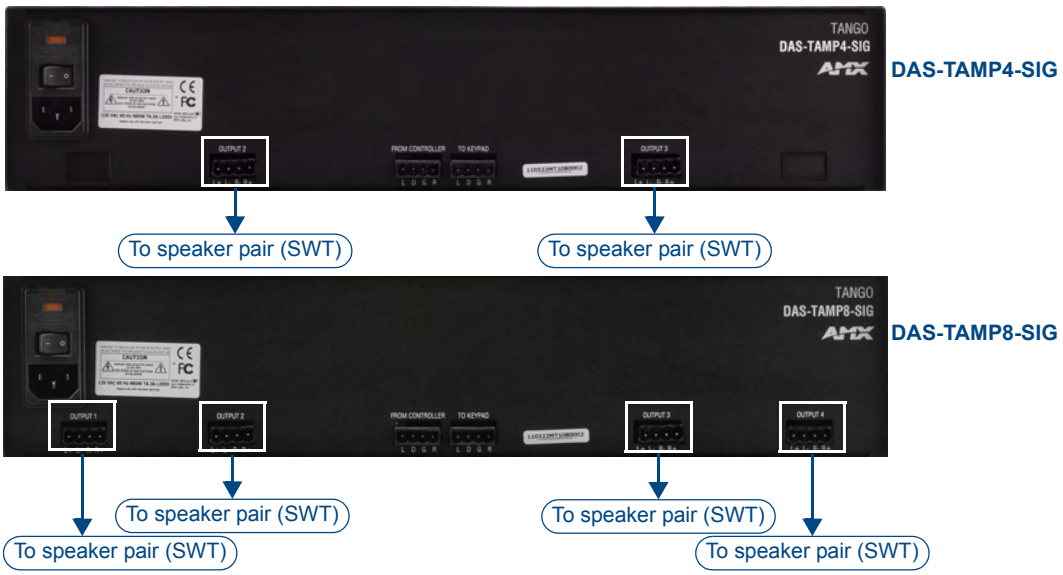


FIG. 2 Tango Amplifiers (rear panels)

Features

- High-quality sound - delivers 60 watts of high-quality sound per channel.
- Expandable - stack up to three Tango Amplifiers units per zone to allow up to 12 speaker pairs (24 channels) in a single zone.
- Easy installation - SWT (Speaker Wire Technology) makes installation simple using four conductor speaker wire.
- Integrates with Tango Series, Delta Series and Mi Series controllers, as well as the W, C, C-DT and EL Series speakers.

Product Specifications

Tango Amplifiers - Product Specifications	
Models Available:	**DAS-TAMP4-SIG** 4-Channel Amplifier: • US version (120V) - FG1103-21 • Int'l version (240V) - FG1103-23 **DAS-TAMP8-SIG** 8-Channel Amplifier: • US version (120V) - FG1103-22 • Int'l version (240V) - FG1103-24
Dimensions (HWD):	• 3 1/16" x 17" x 13 1/2" (7.68cm x 43.18cm x 33.52cm) • RU: 2
Weight:	25.75 lbs (11.68 kg)
Power:	• Average usage: 250 W • Maximum: 750 W • High current Torroidal power supply
Stereo Output:	• Dual mono amplifier stage design • 60 W per channel (1 KHz continuous .006%@ 8 Ohms THD+N) • Each Tango amplifier is capable of providing 480 watts @ 8 Ohms
Configuration:	• Modular Design - configurable in single pairs up to 4 stereo pairs (8 channels). • Stackable (up to 3 Tango Amplifiers)
Control Options:	• Metreau Audio Keypads (DAS-MET-6SRC, DAS-MET-NUM) • C-Series speakers using SWT
Front Panel Components:	
Light Bar	• Blue light bar indicates power status.
Status LED	• Blue LED lights when active
Rear Panel Components:	
Power Switch & Receptacle	The master power switch will remain in the ON position normally.
Output 1-4:	SWT connectors provide direct connection to speakers.
From Controller:	SWT input port (connects to an Audio Controller)
To Keypad:	SWT output port (connects to Matrix keypad or interface) This connector can also be used to connect to a another Tango Amplifier, to allow for expansion (up to three Tango Amplifiers units per zone). See the *Wiring Diagram - Expanded Configuration* section on page 8 for details.
Included Accessories:	Power Cord
Other AMX Equipment:	DAS-MRMK Mi Series Rack Mount Kit (FG1101-60)

Audio Switching

When no audio is present, the Tango amplifier will go into Standby mode and mute the speakers after about 5 seconds. When audio is sensed at the input, the device will un-mute the speakers and the volume may be controlled by the keypad or remote. The switch time between muting and un-muting is approximately 200 milliseconds.

Wiring and Connections

Overview - Speaker Wire Technology (SWT)

Speaker Wire Technology (SWT) allows both data and audio signals to travel over the same four conductor wire. This remarkable technology removes the need for control wire since the control and audio signals are shared on the same wire. The reliability and simplicity of this system has been proven for years. AMX Matrix Audio is the only company that offers a “retrofit solution”, one which allows the replacement of volume controls with AMX Matrix Audio keypads and Controllers, giving full control over the sources. Additionally, the versatility of SWT also allows AMX Matrix Audio products to be connected where the control wire has been run separately from the speaker cable.

Front and Rear Panel Components

FIG. 1 provides views of the front and rear panels of the DAS-TAMP4/8-SIG Tango Amplifiers.

Note that the front panel is identical for both Tango Amps, and the only difference between the two relative to the rear panel is the number of Zone Outputs (2 on the DAS-TAMP4-SIG, or 4 on the DAS-TAMP8-SIG).

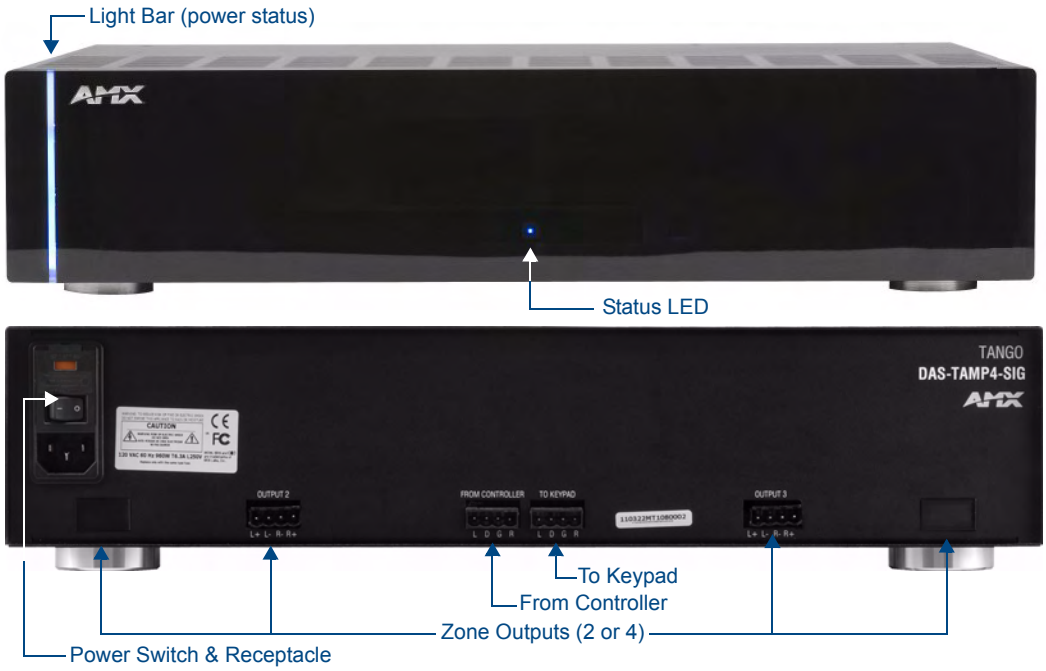


FIG. 1 Tango Amplifiers (DAS-TAMP4-SIG shown)

Cabling Instructions

This installation uses low voltage cabling similar to telephone and alarm wiring, and as such does not commonly have very many restrictions on their installation. However rules may vary in different regions.

CAUTION

Be sure to check for any wiring restrictions required by the electrical code in your area.

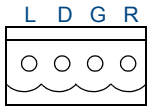
Cable Type

The Tango Amplifier is cabled using standard 4-conductor speaker cable originating at the Tango Controller, passing through the Keypad, and terminating at the speaker location. AMX recommends using a bundled 4-conductor 16-gauge stranded copper wire in a single continuous run.

Connecting Zone Outputs (Speakers)

SWT Connectors

SWT cabling follows a specific pinout configuration that is labelled on the Tango Amplifier, Controller, Metreau keypads, and other Matrix devices, as shown in FIG. 2.



L = Left audio channel (+)
D = Data / Power (+)
G = Ground (-) - also provides return for L/R Audio
R = Right audio channel (+)

FIG. 2 SWT pinout configuration

Connecting SWT Speakers

Matrix Audio SWT Speakers are different from any other speaker available on the market. They allow you to control a single zone of audio without a keypad being installed. Therefore, some different wiring practices must be considered for proper operation and control.

This is achieved by "daisy-chaining" from the first speaker to the second speaker. The main run of 16/4 from the controller will go directly to the first speaker in the zone.

- At the controller end, the wiring is left-to-right: L D G R.
- At the speaker end, refer to the labeling on speaker PCB to ensure the correct wiring.

The labelling at both ends must match or the IR control will not work (i.e.: if you used the RED wire for the Left Audio labelled "L" at the zone output, you must use the RED wire for the pin labelled "L" on the speaker connector).

Be sure to screw the connector down to the speaker crossover board before installing and securing in the ceiling. This will ensure that the connector will not disconnect after installation.

A single run of 16/2 must be run from the first speaker to the second speaker.

Connecting Non-SWT Speakers

Each speaker has a Red (positive) terminal and a Black (negative) terminal. Connect the appropriate wire from the keypad to Red and Black terminals on the Left and Right speakers, as with any standard speaker installation.

Connecting To a Tango Audio Controller

Connect the Tango Amplifier to the Tango Audio Controller via the 4-pin connector labelled **From Controller** on the rear panel of the Amplifier (see FIG. 3).

Connecting SWT Keypads

Connect SWT Keypads (DAS-MET-6SRC or K-Series) to the Tango Amplifier via the SWT connector labelled **To Keypad** on the rear panel of the Amplifier (see FIG. 3).

When stripping cable for use with SWT connector, only strip away about ¼" (6mm) of the insulation from each wire. The complete assembly should not have more than 1/32" (1mm) of bare wire exposed from the bottom of the connector.

Wiring Diagram - Single Amplifier

FIG. 3 illustrates the connections from a Tango Audio Controller, and to SWT Speakers and Metreau (SWT) Keypad.

FIG. 3 Wiring Diagram - Single Amp

Wiring Diagram - Expanded Configuration

FIG. 4 illustrates stacking up to three Tango Amplifiers units per zone, to allow up to 12 speaker pairs (24 channels) in a single zone:

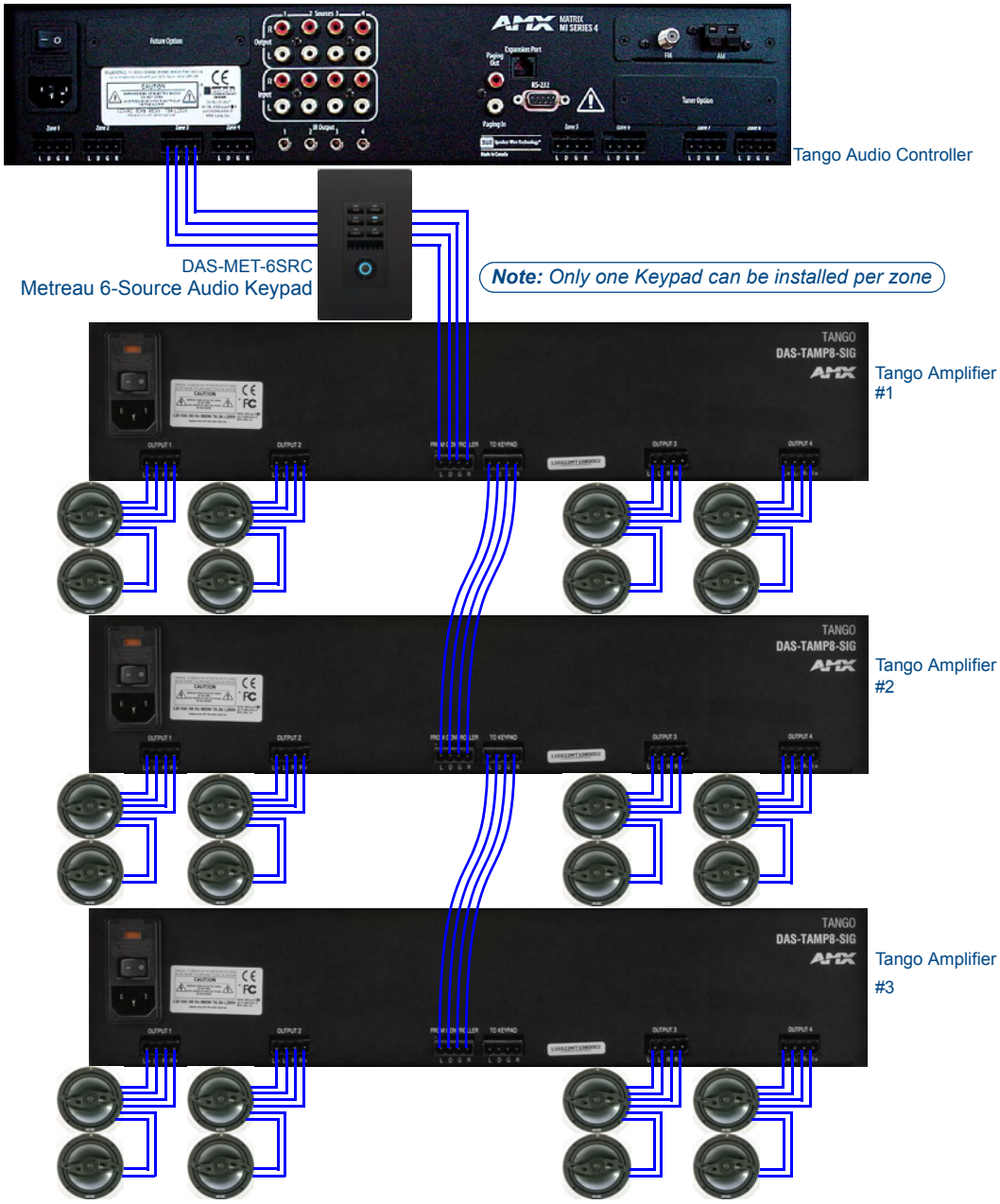


FIG. 4 Wiring Diagram - Expanded Configuration (showing three DAS-TAMP8-SIG 8-Channel Amps)

To "stack" Tango amplifiers, connect the **To Keypad** connector on the first Tango Amplifier to the **From Controller** connector on the second Amplifier. To add a third Amp to the configuration, connect the **To Keypad** connector on the second Amp to the **From Controller** connector on the third Amp.

The DAS-MET-6SRC Audio Keypad can be connected serially between the Audio Controller and the first Amp as shown in FIG. 4.

It can also be connected serially between the first and second Amp, between the second and third Amp, or to the **To Keypad** port on Amp #3, but only one Keypad can be connected in one zone.

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